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ABSTRACT

Four English sixth form or tertiary colleges were visited in 1980 to determine the accommodation requirements of 16-19 year olds who are continuing their education at either of these types of institutions. This paper describes each college, summarizes the range of courses offered and the way the colleges were organized, and the range of teaching and non-teaching accommodations available to the colleges and how this met their requirements. Among the main conclusions was that non-teaching accommodations are not always adequately provided for, particularly at institutions re-using existing premises. Also, teaching accommodation can be significantly increased by specific organizational changes. Finally, it was predicted that by 1984, the 16-19 year-old population would start to decline following its peak in the 1981-82 academic year. Such decline of demand should allow scope both for rectifying deficiencies in non-teaching accommodation, and for the disposal of substandard or temporary teaching accommodation. Capital expenditure planning should strike a balance between short and longer term demand expectations. An appendix provides floor plans for two of the colleges. (GR)

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ED 434 486

Design Note **23**

Accommodation for the 16-19 age group:

FOUR COLLEGES IN 1980

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Accommodation for the 16-19 age group:

FOUR COLLEGES IN 1980

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Foreword

Since 1977 a small group within the Architects and Building Branch of the Department of Education and Science has been looking at the accommodation requirements of the 16-19 age group. Coupled with, and an integral part of, work related to young people over school leaving age has been work related to the rationalisation of secondary school stock in the light of falling pupil numbers. A recent Design Note dealt with the problems of formulating a strategy for the gradual expansion of a NAFE college.[1] A & B Papers 4 and 6 describe utilisation surveys at different types of institutions catering for 16-19 year olds.[2,3] Forthcoming publications will describe a strategy for the gradual rationalisation of the accommodation of a relatively isolated 11-18 school, suffering a sharp drop in projected pupil numbers, and the reorganisation, in response to falling rolls, of secondary education throughout an urban area.

Clearly the education of 16-19 year olds cannot be seen in isolation from the educational provision in an area as a whole. Falling school rolls have brought into sharper focus some of the advantages of a break at 16. The Joint Group on Education for 16-19 Year Olds was set up in 1979 by the Council of Local Education Authorities and the Government to consider the problems faced by local education authorities in providing for 16-19 year olds. It has created a forum for discussion, to which this paper is a contribution.

Acknowledgment
The visiting team would like to thank the staff and students at the four colleges for their co-operation during the visits.

1. Design Note 22 NAFE: Designing for Change.
2. A and B Paper No 4 Accommodation for the 16-19 Age Group: Stockton Sixth Form College Space Utilisation Survey.
3. A and B Paper No 6 Hounslow Borough College Space Utilisation Survey.

Summary

This paper is concerned with the accommodation requirements of 16-19 year olds who are continuing their education at either sixth form colleges or tertiary colleges. It is based on visits made to four such colleges during the Spring of 1980. Two were sixth form colleges and two tertiary colleges; one of each type was purpose-built and the other housed in an existing institution.

The paper briefly describes each college, summarises the range of courses offered and the way the colleges were organised. It looks at the range of teaching and non-teaching accommodation that was available to the colleges and how this met their requirements. Finally, some conclusions are drawn. It can of course be misleading to base general conclusions on such a small sample of visits but they are supported by the impressions gained from a dozen shorter visits in 1977 to other colleges of the same types. The main general conclusions are summarised below:

i There is a very considerable requirement for accommodation not related to timetabled teaching activities. Such accommodation comprises social, recreational, private study and library provision. This need is not always adequately provided for, particularly at institutions re-using existing premises.

ii The utilisation of teaching accommodation could often be significantly increased by specific organisational changes. These would have the effect of increasing the capacity of the teaching accommodation. In addition, if sixth form colleges were to operate the same length of day as tertiary colleges, and if the latter were to make fuller use of the last period in the afternoon, substantially more students could be accommodated than at present.

iii The present national population of 16-19 year olds is expected to reach a peak during the 1981-82 academic year. By 1984, numbers will have fallen back to their present level, and will continue to decline up to the early 1990's. If the utilisation of accommodation could be increased, many colleges could absorb a short-term increase in the pressure of demand. However this would need a change in established attitudes towards the organisation of colleges. Increased utilisation would also tend to exaggerate the deficiencies in non-teaching provision. The falling-off of demand in the longer-term should allow scope both for rectifying deficiencies in non-teaching accommodation, and for the disposal of sub-standard or temporary teaching accommodation.

A positive strategy is therefore required over the next decade. This must take account of the anticipated sharp fluctuation in student numbers. Proposals requiring capital expenditure must strike a balance between the expected level of demand in the short and longer term. However, it is important to remember that most students will be at the colleges for only one or two years. If they miss opportunities then, they may never be able to recoup this loss.

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I Introduction

1 A sixth form college is an institution falling within the schools sector of education; it caters only for students who have reached the statutory school leaving age and wish to continue their education on a full-time basis for one, two or three years. It would normally form the only such educational provision within a specified catchment area, although students would, as an alternative, be able to attend a college of further education.

2 A tertiary college falls within the further education sector. In many ways it is similar to a conventional college of further education, but it caters for all students over school leaving age and offers a combination of academic and vocational courses, mainly for the 16-19 age group. It would normally be the sole institution through which an LEA made 16-19 education available within a particular area.

3 Tertiary and sixth form colleges are relatively recent developments in an area of education that has been the subject of much concern. The first sixth form college was opened in 1967 and the first tertiary college in 1970. By the 1978/79 academic year there were some 89 sixth form colleges and 14 tertiary colleges in existence, catering for a total of 54,500 full-time students. This number represents 9.4% of all 16-19 year olds who were then receiving full-time education. The reasons for the growth in the number of colleges are probably several. Recent research has suggested that they are popular with students; they may also be finding favour with parents who are attracted by the 'cachet' of the college, its ethos and its academic results. The conflicting arguments which local education authorities need to weigh in the light of their particular circumstances have been the subject of study by the Joint Group on Education for 16-19 Year Olds.[1]

4 The purpose of this paper is to try and highlight factors that affect the accommodation requirements of sixth form and tertiary colleges. A team of three architects, a quantity surveyor, and an HMI visited four such colleges during May 1980. Each visit was of two or three days' duration. The scope of the information collected included the range of courses offered and the organisation and method of timetabling employed. Head counts were taken throughout one day of each visit in the teaching and non-teaching accommodation. Discussions were held with both staff and students. Layouts were drawn to show the use of individual rooms and, at the purpose-built colleges, a layout of all the main teaching areas was prepared in order to analyse their current use. (See Appendix).

1. The Group's report is expected to be published towards the end of 1980.

II The Colleges Visited

St Austell Sixth Form College

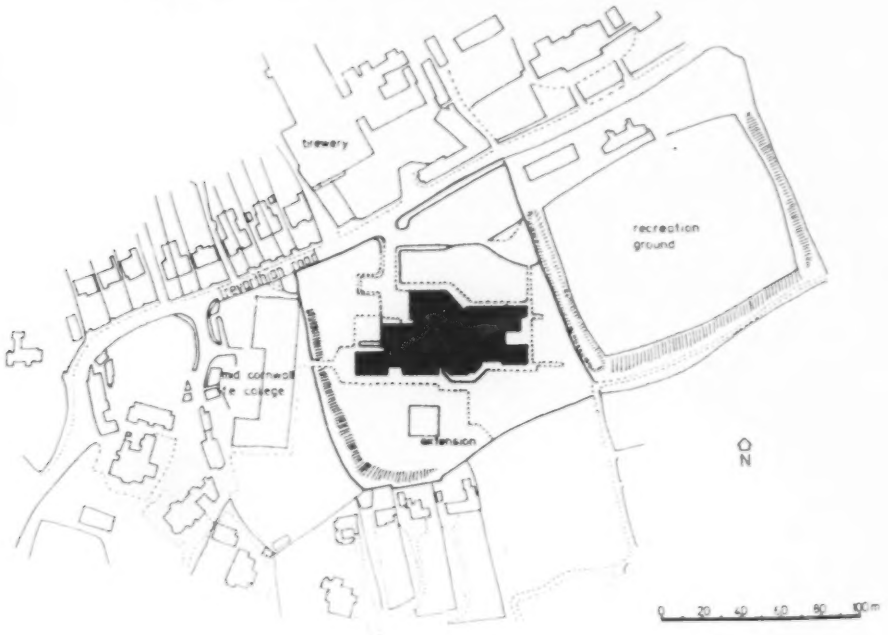
5 The College was opened in 1973 in purpose-built premises designed for 400 students. It shares a site with the Mid-Cornwall College of Further Education. It was formed by the transfer 'en bloc' of the Grammar School sixth form of 250 students together with their staff.

6 There are currently 448 students at the College. Of these 386 are doing two-year courses, 17 are on a third year and 45 are on one-year courses. The catchment area contains five main 11-16 feeder schools (two in St Austell itself) and in addition about 80 students come from further afield, together with a smaller number transferring from the private sector.

7 The College building is mainly two storeys in height, and a central hall area acts as an atrium flanked on two sides by open circulation routes at both levels. The College has no provision for indoor sports or dining; the former is accommodated by use of the Polkyth Leisure Centre, a quarter of a mile away, and the latter is available at the adjacent Mid-Cornwall College refectory. A small extension had just been completed at the time of the visit containing a further two science laboratories and a classroom/social area. The College has its own playing fields some three miles away which are shared with the Mid-Cornwall College.

8 The College is organised into four faculties (social studies, languages, humanities, mathematics and sciences) and offers 24 'A' level subjects together with 25 'O' level/CSE subjects.

Figure 1: Site Plan of St Austell Sixth Form College



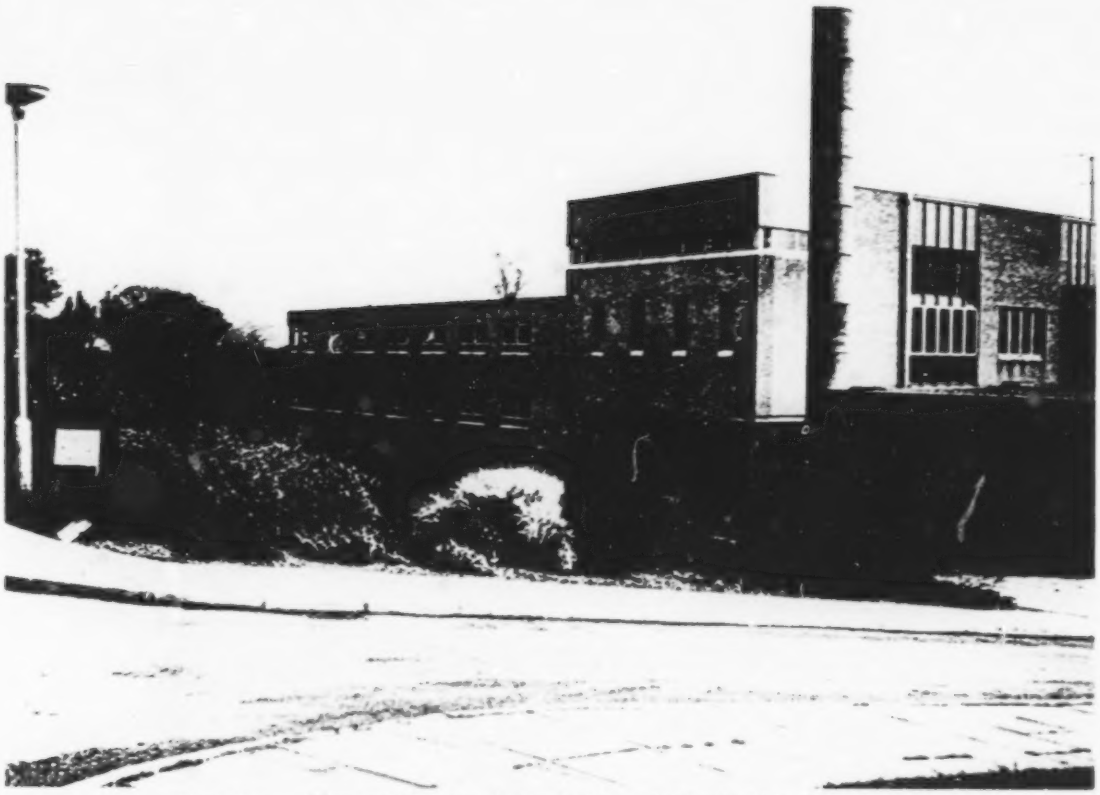
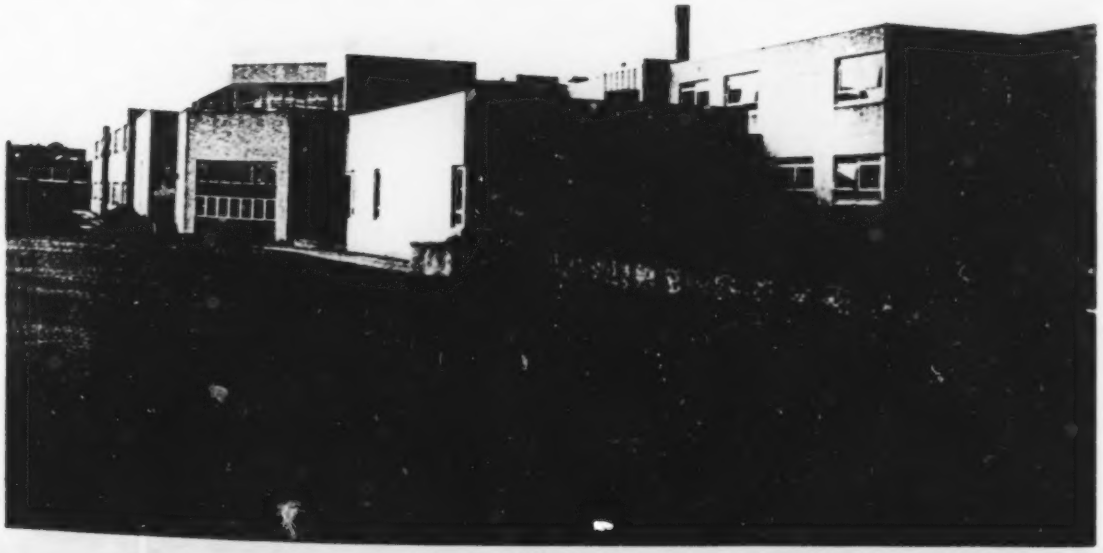


Figure 2: View of St Austell Sixth Form College looking south-east

Figure 3: View of St Austell Sixth Form College looking north-west



Reigate Sixth Form College

9 This opened in 1976 and is housed in the premises of the former Girls' Grammar School. The last year of the Grammar School intake forms the fifth form of 140 girls. Due to the fact that, at the same time, the local Boys' Grammar School went independent, there is a predominance of girls (68%) in the sixth form. This will gradually change as the intake from the comprehensive schools progressively reaches the College.

10 There are currently 560 students in the sixth form. Of these 459 are doing two-year courses, 7 students are doing a third year, and 94 are on one-year courses. The catchment area is about five miles in radius. Within the immediate area there are three 12-16 feeder schools. Students also come from the independent sector and from more distant maintained schools.

11 The main building dates from the 1920's; a HORSA kitchen and refectory were added in the 1940's, and an annexe for music and art was added to the main building in the 1950's. This accommodation housed the three-form entry Girls' Grammar School. When the College became a sixth form college, a two-storey ROSLA building was added, containing home studies, typing, craft workshop, design studio and a drama space formed from a common room. Over the years a number of temporary classrooms have also been accumulated. The College has a single multi-purpose hall, a small playing field and tennis courts. In addition it has the use of off-site playing fields shared with contributory schools. Occasional use is made of the adjacent pre-war swimming baths, and the sports centre at Leatherhead 10 miles away.

12 The College is not organised on a departmental or faculty basis, but operates as an entity. It offers 26 'A' level subjects, 29 'O' level subjects and 8 CSE subjects.

Figure 4: Site Plan of Reigate Sixth Form College

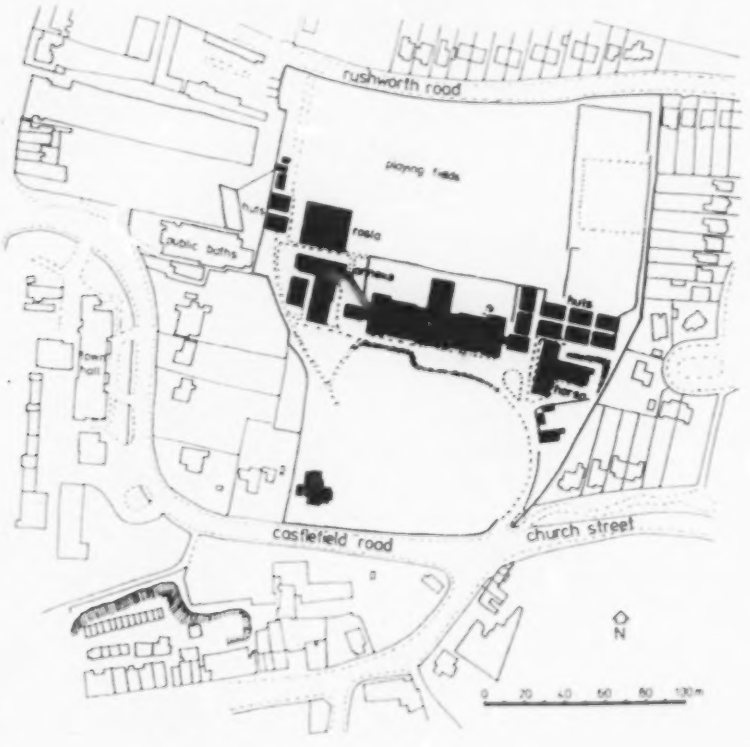


Figure 5: View of Reigate Sixth Form College looking east

Figure 6: View of Reigate Sixth Form College looking south west

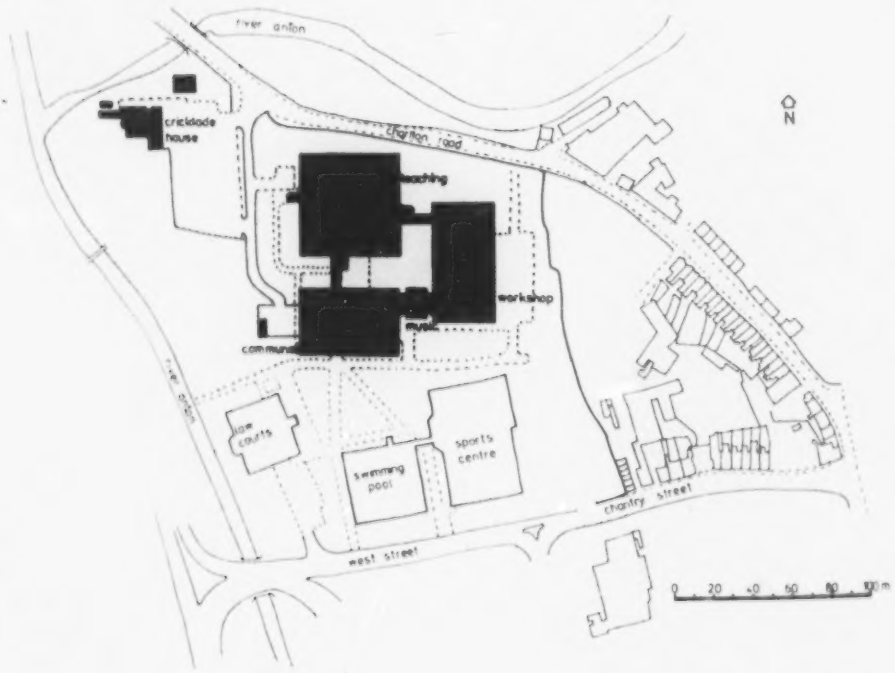
Cricklade College, Andover

13 The College opened in 1974 with 190 full-time students in purpose-built accommodation designed for 800 FTE students. The current numbers are 700 full-time students, of which 350 are doing two year 'A' level courses, and 450 part-time day students. The catchment area is of 10-12 miles radius. There are three main 11-16 feeder schools in Andover itself, and in addition the catchment includes rural areas, London overspill housing estates and industrial estates. Some 40-50 students per year transfer to the College from independent schools.

14 The complex consists of three linked blocks: a communal/administration block, a workshop block, both single-storey, and a central two-storey teaching block – this latter is a square block relying on artificial light and ventilation and having a demountable/relocatable partition system. The College shares a site with a sports complex and a block containing magistrates' courts.

15 The College is organised into five departments – business studies, mathematics, science and technology, humanities and creative arts. It offers 23 'A' level subjects together with 26 'O' level subjects in addition to a range of vocational courses in Business Studies, Engineering and Catering.

Figure 7: Site Plan of Cricklade Tertiary College



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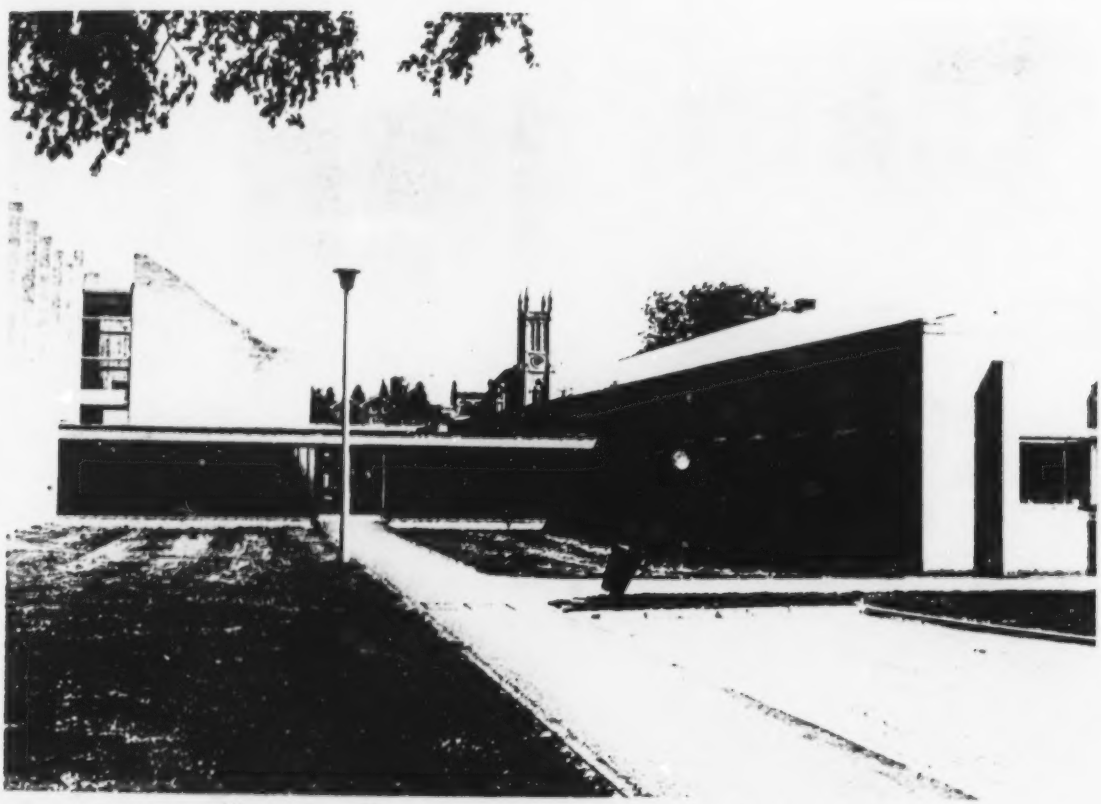
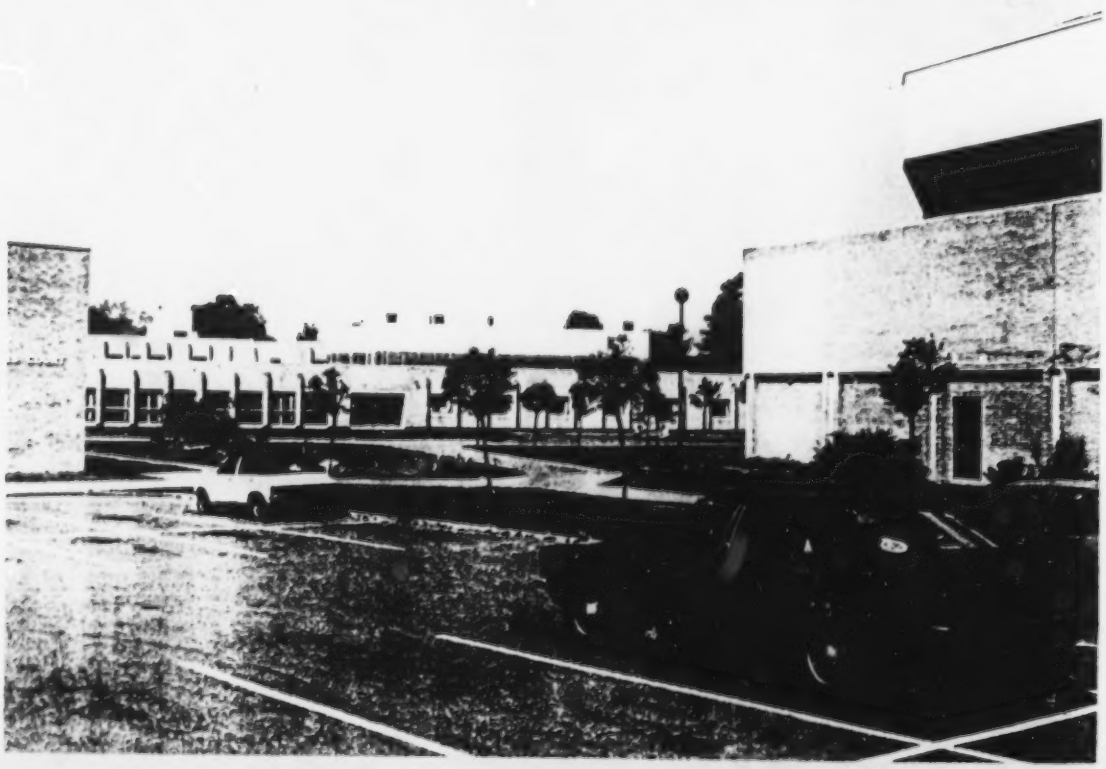


Figure 8: View of Cricklade Tertiary College looking east

Figure 9: View of Cricklade Tertiary College looking north



Richmond upon Thames College

16 The College opened in 1977 occupying the premises of the former Twickenham College of Technology. Students and most of the staff were drawn from both the College and the two sixth form colleges in the Borough. All three institutions were then closed.

17 The College is unusually large, having 1,685 full-time/sandwich students of which about 800 are doing traditional sixth form work, 1,545 part-time day/block release students, and 325 evening only students. About 15% of the full-time students and 30% of the part-time students are following post-18 advanced courses. Students are drawn from the nine contributing 11-16 schools in the Borough, in addition some out-Borough students are accommodated and a steady proportion of students arrive from the independent sector.

18 The College has gradually grown from its late 1930 origins by a variety of post-war additions. Since becoming a tertiary college a library, music centre and sports hall have been completed. In addition construction of an administration block and a teaching block has been started.

19 The College is organised on the basis of a matrix system. Students are enrolled into eight divisions each under a director; the lecturers are organised into 16 teaching teams, each team having a team leader. The College offers 33 'A' level subjects; in addition there are other two-year courses including the International Baccalaureate. A wide range of one-year courses in 'O' level subjects is available together with 9 CEE subjects. A one-year course in foundation studies and also in career preparation provides for the full range of academic ability. Many full- and part-time vocational courses are offered, including Business Studies, Engineering, Art and Design, and Construction.

Figure 10: Site plan of Richmond upon Thames Tertiary College

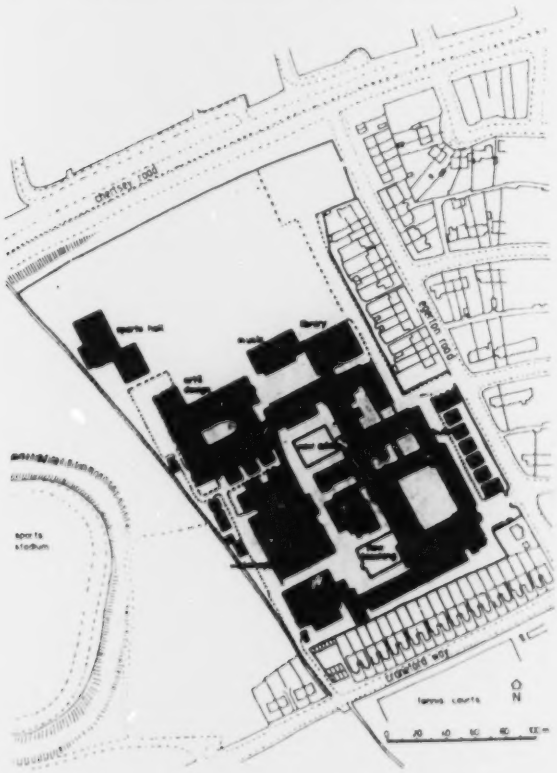


Figure 11: View of Richmond upon Thames Tertiary College looking west

Figure 12: View of Richmond upon Thames Tertiary College looking south, showing the new library and music centre

III The Range of Courses Offered

Academic Courses

20 All the colleges visited offered a wide range of courses for full-time students wishing and qualified to take two or three 'A' level subjects on a modified 'à la carte' basis of subject selection. In addition there was the opportunity of supplementing 'A' levels with 'O' level repeats or additional 'O' level subjects. 'New sixth form' students were usually provided for by a one-year course in a range of 'O' level/CSE subjects; two of the colleges also offered CEE subjects.

Vocational Courses

21 The two tertiary colleges also offered a wide range of vocational courses with the opportunity of combining these with 'A' level courses. Both colleges offered courses in business studies (BEC, secretarial courses) and engineering (TEC, City and Guilds). Cricklade offered courses in catering, home management and family care and pre-Health Service courses. At Richmond vocational courses in art and design (from foundation to higher diploma), printing, construction (CITB and TEC Certificate and Diploma) were available.

General Education Courses

22 All the colleges provided some form of broadening element to their full-time courses. This was variously described as complementary studies, main studies or general studies, and was seen as a necessary, and generally compulsory, part of a student's education. The choice of subjects was wide and always included a number of sporting activities. There was not normally an examination in these subjects, although at Richmond more emphasis was placed on the use of supplementary examined courses to provide the broadening element, while at Reigate a popular CEE course in PE was developing.

Courses for the Less Able Student

23 At the two sixth form colleges lower level work was confined to 'O' level, CSE or CEE courses, although at Reigate there was limited provision for RSA shorthand/typing (Grade 2) courses. Both the tertiary colleges offered remedial (special foundation, general education) courses. In addition Richmond provided facilities for small groups of mentally-handicapped students, and Cricklade offered linked courses for ESN(M) students (2 hours/week). None of the colleges visited offered innovatory courses or courses designed specifically to attract non-participants. In the tertiary sector it was recognised that there was a gap between the lower level TEC and BEC courses and the remedial courses.

IV The Organisation of the Colleges

The Organisation of Time

24 The pattern of the week for full-time students at the four colleges was similar. About three-fifths of the time would be spent on examined course work, one-fifth on complementary studies, including sport, and one-fifth would be untimetabled study time. Students following vocational courses spend proportionally more time on course work and less on complementary studies and private study. All the colleges devoted at least one period per week to tutor groups for pastoral and organisational purposes.

25 The length of the daily timetable varied. The sixth form colleges were in operation from 9am to 3.45pm and the tertiary colleges from 9am to 5pm. The three smaller colleges had arranged a fixed break for lunch of about one hour. A limited amount of teaching might take place during the lunch break, to overcome particular timetabling problems, while the largest college programmed work throughout the day. Two of the colleges had organised their timetable so that complementary studies were taken by the whole college at fixed periods in the week. The freedom with which students were allowed to use their free time varied between institutions, partly due to the different regulations under which sixth form colleges and tertiary colleges operate. In the former, students were required to remain on campus throughout the working day, although in both cases they were allowed to leave during lunch break provided that written parental consent had been obtained. At the tertiary colleges students were free to leave the college when they were not timetabled for classes. The extent to which students actually made use of this freedom depended on the availability of transport, the attractions of the town and whether they had to wait for a class later in the day. In the main, students appeared to arrive for their first class whenever this was timetabled and leave soon after their last. In between, there was some traffic of students in and out of the college but a substantial number of them would remain on site.

The Organisation of Space

26 Only at Reigate was the timetable based on centralised space allocation. Generally territorial control was devolved to smaller subject-based units within the College, who would be allocated a group of rooms. The timetabling of these smaller units was therefore relatively straightforward, although some borrowing and lending of rooms was invariably required during certain periods. The extent to which this happened often depended mainly on personal relationships within the teaching staff. It was noticeable that rather more interchange of accommodation occurred between staff teaching academic rather than vocational subjects. For example, at Cricklade general teaching related to catering courses took place in the training restaurant rather than in spare classrooms elsewhere. At the same College mathematics, forming part of vocational courses, was often not taught in the maths area but in the vicinity of the specialist accommodation related to those courses. At all the colleges 'A' level subject selection was based on a choice of a single subject from four or five blocks of subjects. Popular subjects would appear in several blocks, minority subjects in a single block. This method of subject selection was then used to form the basis of the timetable with each block being allocated five or six periods per week. A series of related blocks also governed 'O' level or CSE/CEE subject selection, normally on a four period per week basis.

Organisation Related to Space Utilisation

27 The longer day operated at the tertiary colleges was not fully reflected in their timetabled use of space. Whilst vocational work, particularly by part-time students, would tend to be spread evenly across the day, it was noticeable that the majority of academic work finished at 4pm or 4.15pm and the last period in the afternoon was very little used. The timetabling of 'A' level selection blocks together with the blocking of complementary studies and tutor periods, in order to facilitate the strongly expressed need to integrate students from different courses, tended to impose considerable constraints on the timetable, often to the detriment of effective space utilisation. For example, at St Austell, there were six periods per day in the timetable

(excluding assembly). For six periods in the week, or one-fifth of the available time, all students were engaged either on complementary studies or in a tutor period. During this time a good deal of the specialist accommodation, in particular the science laboratories, was unused. If this situation could be avoided a college having five or six laboratories would effectively gain one additional laboratory.

28 A timetable analysis was undertaken at St Austell, Reigate and Cricklade. This enabled the frequency of use of all teaching spaces to be calculated as follows:

$$\text{Frequency of use} = \frac{\text{Number of periods in use}}{\text{Number of periods available}^*} \times 100\%$$

*Availability overall is taken to be the length of the weekly timetable including complementary studies etc but excluding breaks. Frequency of use can also be calculated for specific portions of the timetable.

The highest frequency of use (83%) was found at Reigate. The most important factors seemed to be the higher level of use of the teaching space on Wednesday afternoons, perhaps because complementary studies were spread relatively evenly throughout the timetable. The frequency of use at St Austell (70%) and Cricklade (67%) was similar but the figures conceal two different patterns of underuse. At St Austell this was most evident during the five periods per week devoted to complementary studies; ignoring these periods the frequency of use was 92%. At Cricklade underusage was not only due to the timetabling of team games on Wednesday afternoons, it was also due to the general failure to use fully the last period in the afternoons when the frequency of use dropped to 37%.

V Accommodation for timetabled teaching activities

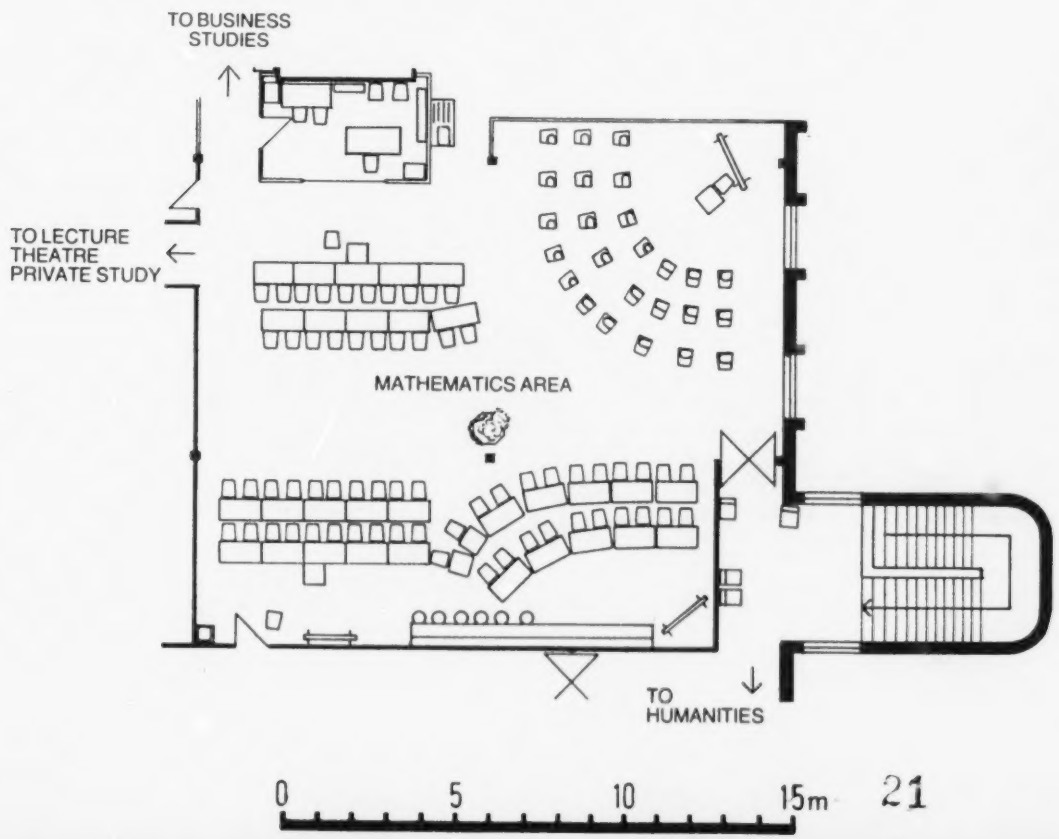
The Balance of the Teaching Accommodation

29 Assuming there is not a gross over-provision of teaching area, the balance of the teaching accommodation is crucial to the successful operation of a college. Apart from the relative proportions of the various categories of teaching area, an important aspect of balance is the way the accommodation is actually provided – the range of room sizes and the proportions of open and closed teaching space.

Open Teaching Areas

30 Of the four colleges visited only Cricklade had any significant provision of open teaching areas. These were confined to the mathematics area (figure 13) and the science area, although this had been provided with (or acquired) a measure of partial sub-division (figure 14). The mathematics area appeared to be well liked and functioned satisfactorily with little evidence of noise disturbance. This may in part be attributed to the characteristics of the subject, which involves a preponderance of quiet working, note-taking and calculations, as opposed to a subject such as English which would involve a greater degree of group discussion. This conclusion was reinforced by the observation of the use of the English area where the sliding/folding partitions were invariably closed. In the mathematics area the generous space standards of 2.6m^2 per work place (as seen), although including an area properly required for circulation, did allow a measure of separation between groups (figure 15).

Figure 13: Plan of the maths area at Cricklade

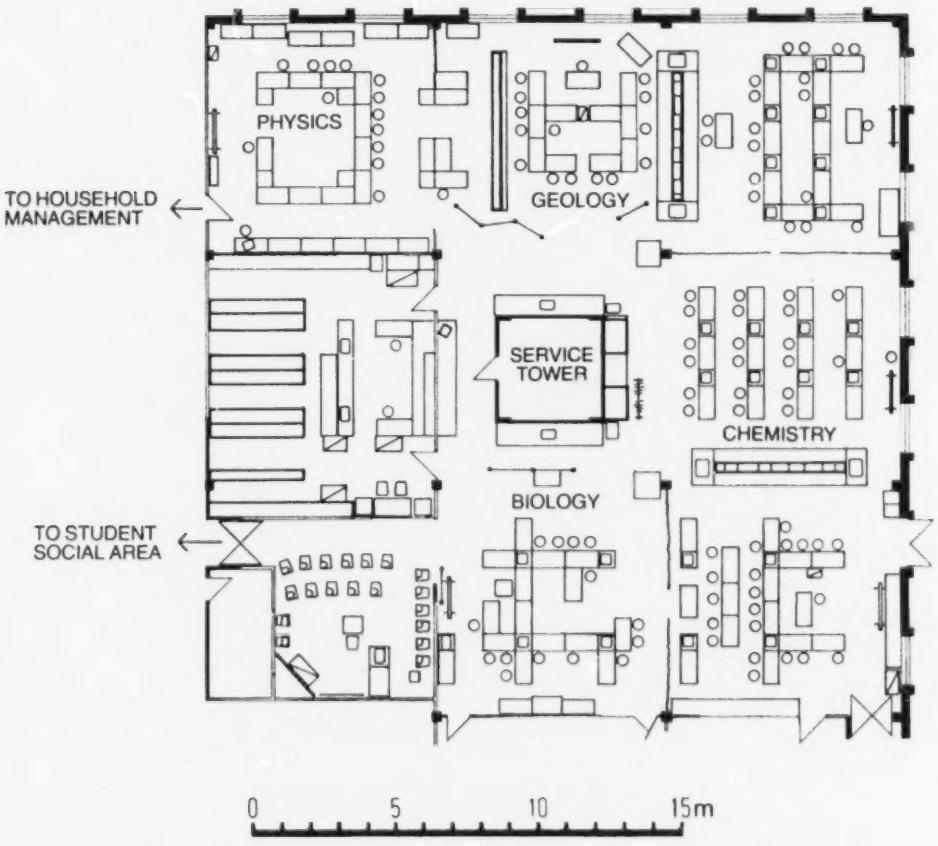


Room Size Distribution

31 The room size distribution not surprisingly differed between the two purpose-built colleges and the colleges based on existing premises. At Reigate general teaching accommodation was formed mainly of rooms designed for 30 desk-bound grammar school pupils. These made relatively spacious rooms for sixth form groups (figure 16), however they were not large enough to allow one room to be sub-divided into two. The lack of variety in room sizes was exacerbated by the presence of standard temporary classrooms.

32 At Richmond a similar situation prevailed, with a large number of classrooms of between 40 and 55m^2. However there was a smaller variation in the group sizes using these rooms than at Reigate on account of both the size of the College and its FE characteristics. The room size distribution at Cricklade, excluding for this purpose specialist vocational areas and open areas, and St Austell make an interesting comparison (figure 17). Whilst both colleges exhibit a range of room sizes, at St Austell a strong bias is displayed towards small rooms. This bias is not fully reflected in the range of group sizes using the rooms, and hence they are often overcrowded. At Cricklade the slight bias towards rooms of 46m^2 and over is not justified by the group size distribution. These rooms tend to be underoccupied, and a greater provision of rooms of 35-40m^2 would have been more appropriate.

Figure 14: Plan of the science area at Cricklade



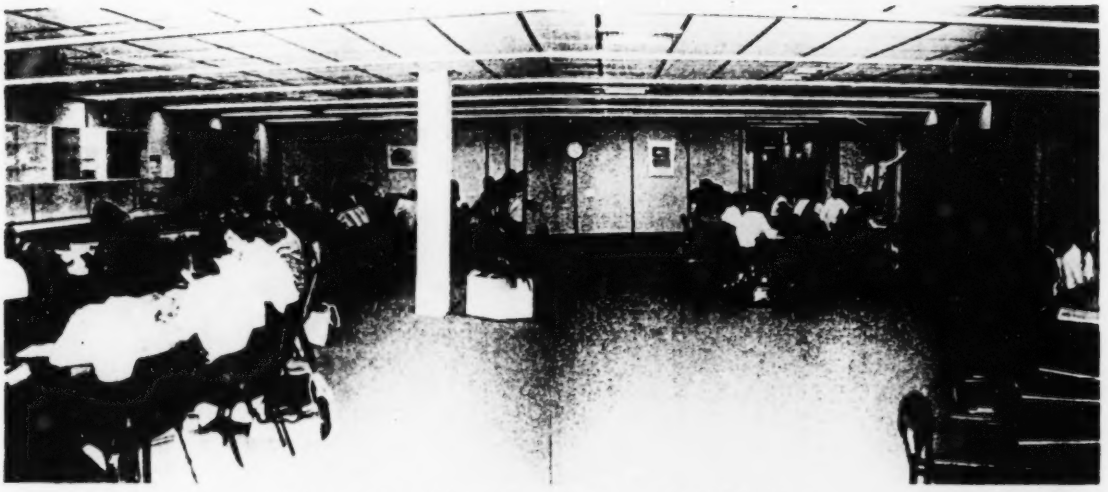


Figure 15: View of the maths area at Cricklade

Figure 16: A typical classroom at Reigate

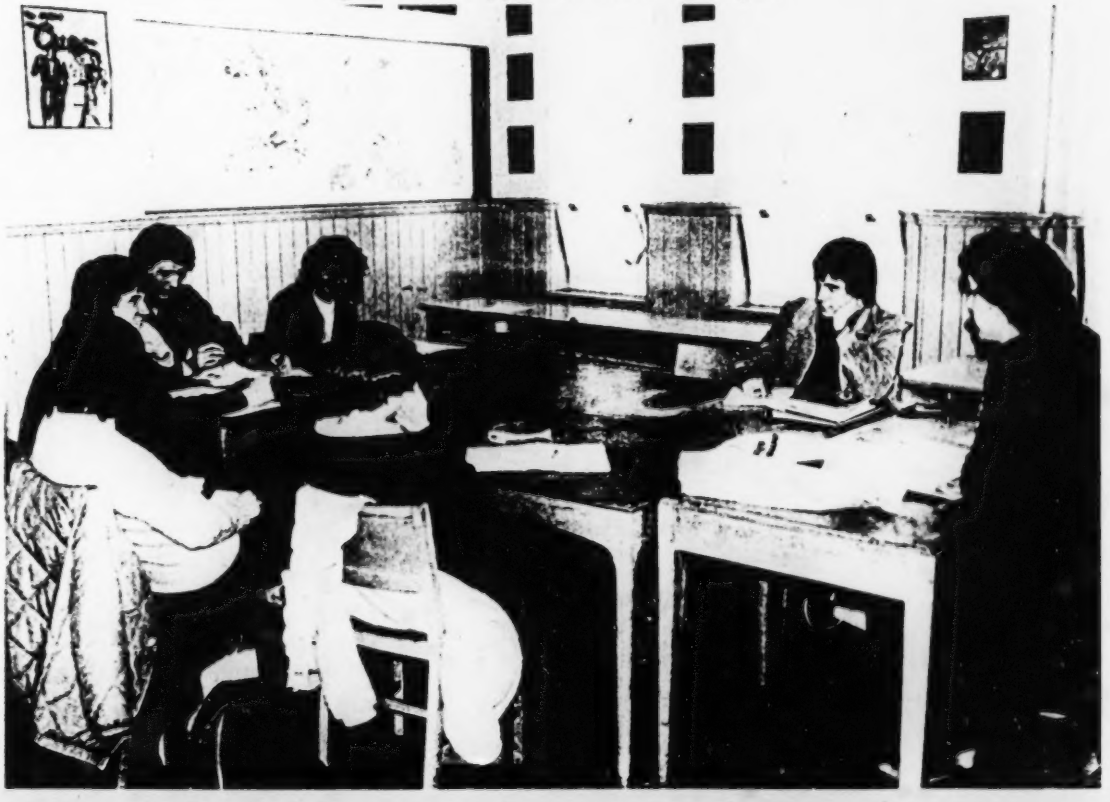
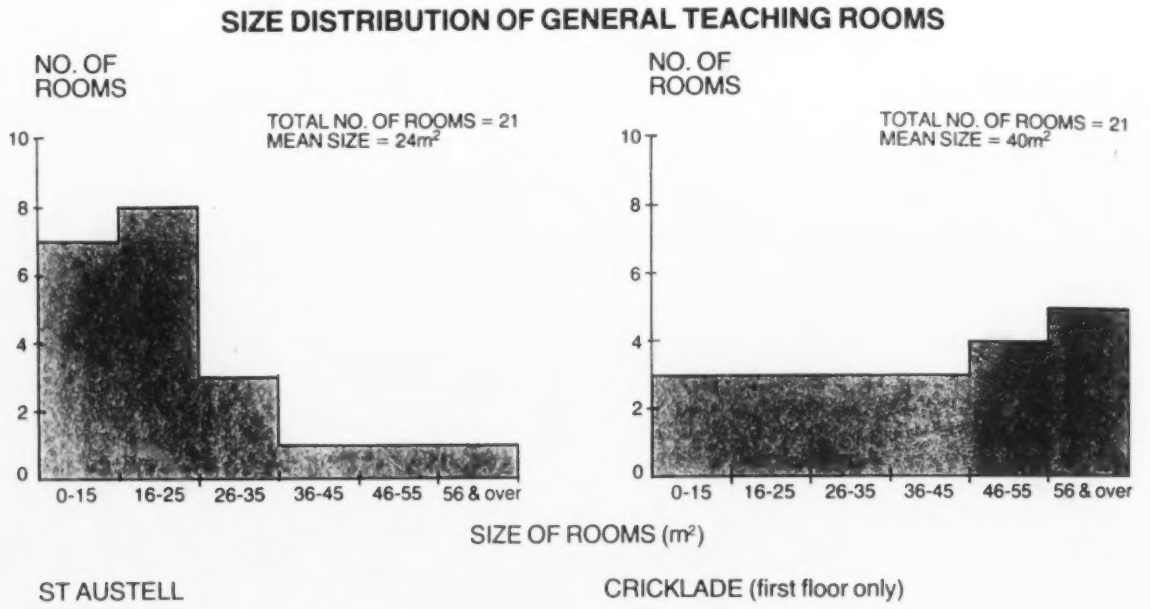
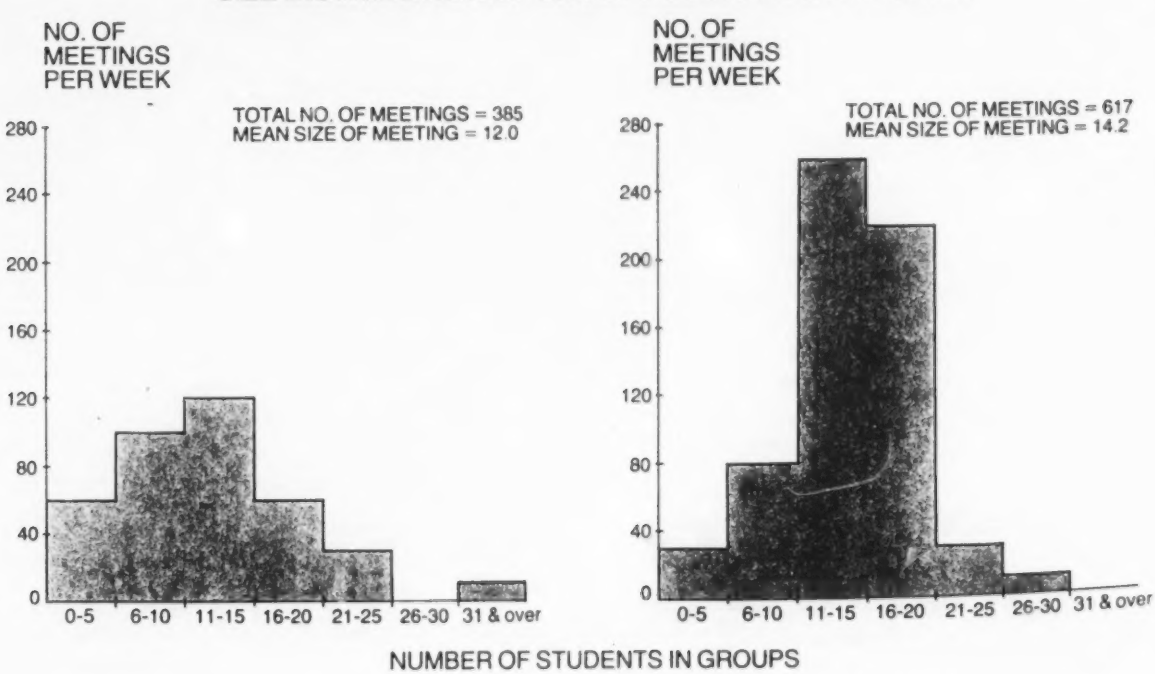


Figure 17: The distribution of rooms and teaching groups at St Austell and Cricklade





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The Relationship of General Teaching to Specialist Areas

33 It was noticed that a close relationship was required between certain specialist areas, in particular areas for vocational work, and general teaching areas – often a single timetabled period might comprise, say, 15 minutes theoretical work, the remainder of the time being spent on practical work. It was therefore interesting that at Richmond a similar arrangement had been achieved in the science laboratories, where some of the space was arranged for note-taking.

Space Standards in Teaching Areas

34 At both the purpose built colleges, a detailed survey was made of the furniture layout and the capacity in use of the main teaching accommodation. This revealed some marked differences between the two colleges, with Cricklade having about 20% more area per workplace for comparable activities. This is due in part to the different design constraints between the school and FE sectors, and also to the fact that St Austell was operating with 12% more students than the design was intended to accommodate. The average nett area per workplace for general teaching rooms was $1.6m^2$ at St Austell and $1.9m^2$ at Cricklade, and for science laboratories was $3.2m^2$ at St Austell as compared with $3.9m^2$ at Cricklade.

Provision for Minority Subjects

35 All the colleges visited contained some provision for a range of minority subjects including music, craft and home economics. However, the utilisation of these spaces by students on examined courses in specialist subjects was low, due to the small group sizes involved. Their utilisation was usually increased by their use for complementary studies and also for other subjects. At St Austell the combined art/craft/design area went some way to getting over this problem, though at the expense of the development of many worthwhile activities.

Provision for Sport

36 Both purpose-built colleges lacked their own exclusive facilities for inside sporting activities. In the case of St Austell the annual budget provided for the regular hire of community sports provision located nearby. In the case of Cricklade, rather than being provided with its own sports facilities, the College has the use of the District Council's sports complex on the campus. The LEA leased part of the site to the District Council for the provision of a sports hall and swimming pool for the whole community. This was partly funded by the LEA together with a grant under the Physical Training and Recreation Act. Both these arrangements appeared to be advantageous in practice, as the range of facilities was extensive, and the hire charges incurred were considerably less than recurrent costs, including loan charges, which would have been incurred had even a single gymnasium or sports hall been included within the College. For outside sporting activities three of the colleges made use of playing fields shared with other institutions – timetabling problems meant that it was difficult to field teams other than, for example, on Wednesday afternoons.

Flexibility

37 Only at Cricklade was there any flexibility built into the building fabric. In the teaching block demountable partitions were combined with a ceiling location grid and an artificial lighting and ventilation system to allow changes in layout to be made easily. Advantage had been taken of this adaptability and several alterations had been made since the College opened, although mainly of a minor nature. The occupants have had to pay a price for this in terms of comfort, due to shortcomings in the heating and ventilation system currently undergoing major improvements, and opinions were divided as to whether the advantages outweighed the disadvantages.

38 Flexibility in use also depends on the balance between open teaching areas and enclosed rooms. The flexibility offered by the open plan mathematics area at Cricklade did not appear to be extensively used, perhaps due to the availability of an adjacent lecture theatre. Thus

whilst lead lessons were often given to two or three classes together, this would be done in the lecture theatre, not in the open area itself. However, it did provide a potential space for examination groups of up to 100 students.

Spaces for Large Teaching Groups

39 Three of the colleges had lecture theatres with tiered seating and audio/visual and demonstration facilities – indeed St Austell had two such spaces. A lecture theatre was generally seen as valuable, and allowed several classes in the same subject/year group to be brought together when appropriate. In addition, they were considered most useful for visiting speakers and were popular for evening use.

40 Morning assemblies were held only at the two sixth form colleges. At Reigate about one-third of the students could be accommodated in the multi-purpose hall. At St Austell the central atrium space could be opened up to the student social area to allow all students to attend a 10 minute assembly each morning. As well as being a communal act of worship, this proved to be a most efficient way of communicating information on day-to-day events (figure 18).

Provision for Examinations

41 The problem of accommodating students during examinations was an important issue for all the colleges. Richmond and Reigate had multi-purpose halls which they used for this purpose, thus putting them out of use to the rest of the college for about a quarter of the academic year. At Cricklade the Principal felt his lack of a suitable large space for examinations, when up to 200 students might be taking examinations simultaneously. The open plan mathematics area was used for examinations but could take only about 100 students. At St Austell the problem was to some extent solved by the hire of local halls. Mock examinations, requiring less stringent conditions, could be held in the central space but the tiered floor was said to make it unsuitable for proper examinations.

Figure 18: Morning assembly at St Austell

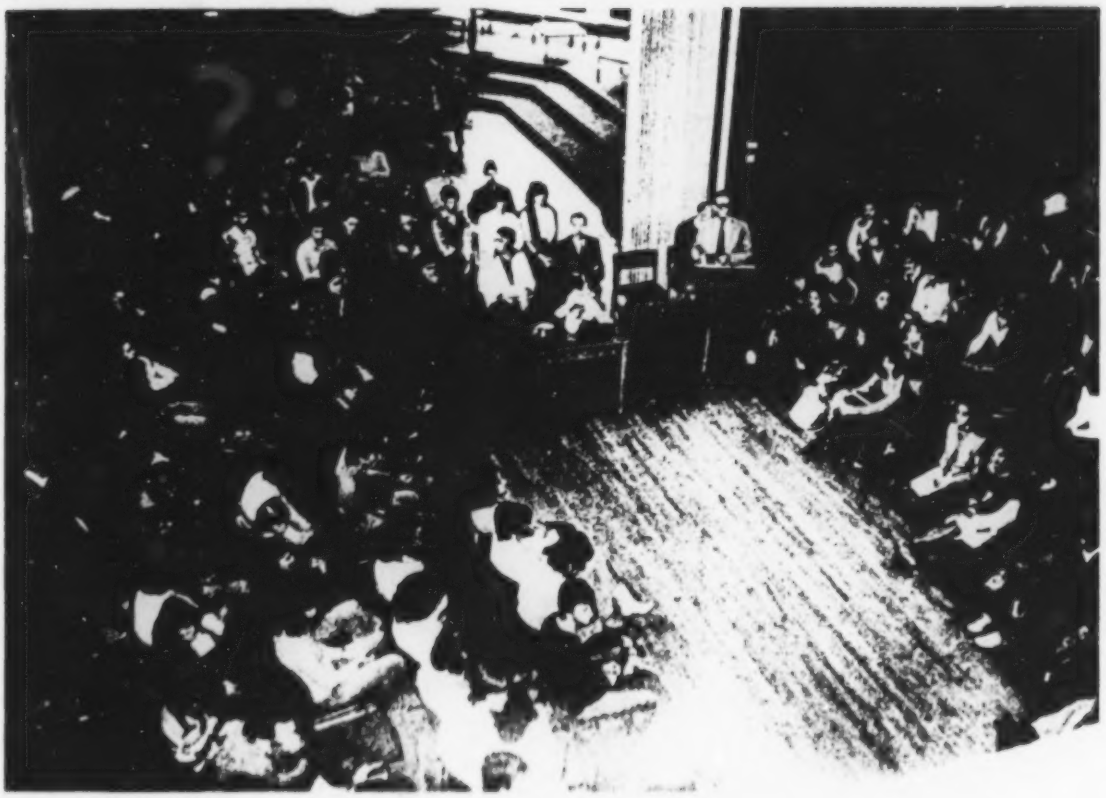

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Figure 19: The new library at Richmond

Figure 20: Informal study in the library at St Austell

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VI Accommodation for non-timetabled activities

General

42 The organisation of all the colleges meant that academic students would have, on average, one-fifth of the weekly timetable unallocated, in addition to the lunch break. Full-time students following vocational courses would tend to have rather less free time and day-release students little or none. A substantial proportion, up to one-fifth, of the full-time students therefore needed to be accommodated in non-teaching areas such as the library, private study and student social areas. Whilst part-time students made little use of these areas both full-time and part-time students can be expected to use refreshment and catering provision. The needs of the staff must also be considered. When they are not teaching many remain at the college and require accommodation in which to work and also a place to relax.

Libraries

43 Three of the colleges had modern purpose-built libraries. At the fourth (Reigate) the library was a modest conversion of two class-rooms and a corridor space. In addition to the book stacks, containing between 20 and 36 books per full-time student, there were areas for browsing and reading periodicals, private study at tables or the less popular carrels, together with some provision for the use of audio equipment, micro-fiche viewers etc. A summary of the library provision is given below:

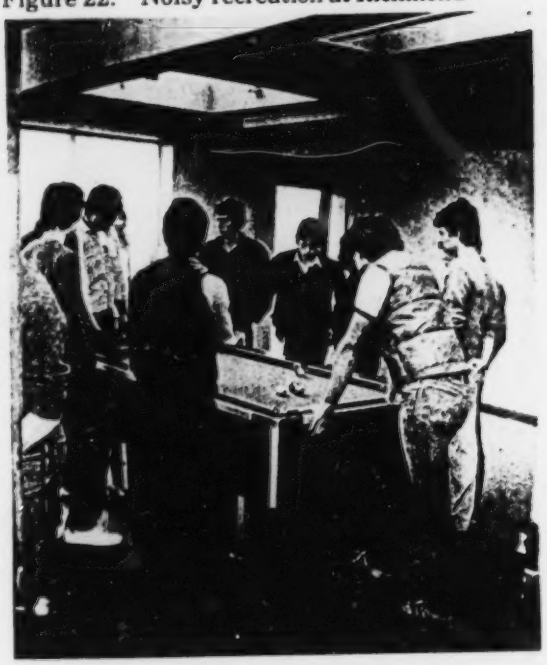
Libraries and private study spaces in them – as seen		
College	Library area per full-time student (m^2)	Private study places in the library per 100 full-time students
St Austell	0.47	17.9
Reigate	0.35	8.8
Cricklade	0.47	14.6
Richmond	0.44	9.4

Figure 21: Quiet conversation and study in the social area at St Austell

Other Private Study and Social Provision

44 Apart from private study in the formal atmosphere of the library it was observed that, where facilities permitted it, there was considerable overlap in activities conventionally described as social and private study. Many students did not appear to need the controlled environment of the library to concentrate on their work, nor did they always require tabletops, nor the seclusion of carrels. The distinction between group study, conversational study and social activities was thus blurred (figure 21). Refreshments, however, were seen as being a welcome adjunct. There was a clearer distinction between relatively quiet social study activities and the noisier recreational activities such as the use of pinball machines or pool tables (figure 22). The provision of areas of this type in the four colleges visited was as shown below:

Figure 22: Noisy recreation at Richmond



Student Study, Social and Recreational Areas – as seen					
College	Formal study areas outside library		Private study/ social areas	Other recreational areas**	Total student areas outside library
	m^2	places per 100 FT students	m^2 (nett)	m^2 (nett)	m^2 per FT student
St Austell	18*	3.3	195	–	0.48
Reigate	102	10.5	69	–	0.32
Cricklade	46	7.1	200	–	0.35
Richmond	–	–	107***	49	0.09

*Excludes 37m^2 now used as general teaching.
**Excludes PE and catering provision, also halls mainly used for teaching.
***Common room undergoing conversion, part taken out of use.

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Refreshment and Catering Provision

45 All the colleges contained some provision for light morning and afternoon refreshments. Three of the colleges also contained catering provision in the form of kitchens and single refectories; at St Austell there was no such provision and the snack bar was run by the students. Problems were experienced in accommodating students during times of peak use, particularly during morning and afternoon breaks. Clearly any such provision, especially when centralised, inevitably becomes overcrowded at peak times when the whole student body is timetabled for a refreshment break simultaneously; this was the case at three of the colleges. In practice the situation is to some extent self-regulating as a proportion of students tend not to bother to queue and do not use the facilities provided. At the largest college the longer catering times coupled with the timetabling of classes throughout the day with no specific breaks virtually overcame these problems.

Staff Accommodation

46 Staff at the colleges needed places to work when not teaching and also space for relaxation. Generally workrooms for senior staff, with lower teaching loads, were dispersed around the colleges and related to staff subject areas. Staff social provision at each college was centralised, and in the two sixth form colleges was associated with a staff work area. At the tertiary colleges staff workrooms were provided for groups of 10-15 staff (figure 23), and either associated with departments (Cricklade) or teaching teams (Richmond). The centralisation of staff social provision appeared successful and well used with the exception of Richmond. Here staff tended to remain in their team rooms – this was partly a product of the sheer size of this College and partly due to the inadequacy of the centralised provision.

Figure 23: A workroom for 10-15 staff at Cricklade

VII Conclusions

The Provision of Non-Teaching Accommodation

47 The proportion of students having free time gives rise to a very significant demand for suitable accommodation; this demand is often not fully appreciated, although the purpose-built colleges went some way towards meeting it. It was clear that in addition to the formal library/ resource and private study spaces – which were well used – there was a need for spaces catering for a range of activities which tended to overlap. This range extended from quiet study through conversational study/social to noisy social/ recreation activities. Ideally, there was a need for refreshments to be available as an adjunct to all these activities.

48 It was not only the scale of student social/ study areas that was inappropriate in most cases – their character often left much to be desired. This ranged from the 'airport lounge' approach at Cricklade (figure 25), to the converted but somewhat isolated provision at Reigate (figure 26), and the ex-gymnasium at Richmond (figure 24). Undoubtedly the most attractive arrangement was to be found at St Austell, although even here the central part of the area was often unused (figure 27).

Figure 24: The main student social area at Richmond – the old gymnasium

The Utilisation of Teaching Accommodation

49 This is the product of two factors. Firstly, the frequency of use of rooms in comparison with their availability. Secondly, the level of occupancy of rooms when they are in use.

Frequency of Use

50 This is a measure of the balance of the various categories of teaching accommodation in relation to the range of work taking place in them. In addition, it relates the organisation of the college and its timetable to the way it uses its available teaching accommodation. In order to obtain a high level of usage of the available rooms, it is necessary that the timetable provides a relatively even loading for all types of teachng areas across the week. Several factors tended to militate against this. The virtual cessation of teaching activities during fixed lunch breaks meant that most teaching accommodation would be unused for at least 5 hours per week. In addition, where complementary studies were organised 'en-bloc' this gave rise to a situation where specialist accommodation, such as science laboratories, would be standing empty for a further 5 or 6 periods per week. Fixed tutor periods added another period to this total. At the tertiary colleges the unwillingness to timetable non-vocational groups into the last period of the afternoon had the effect of increasing the intensity of use of teaching rooms throughout the rest of the day.

Level of Occupancy

51 This is a measure of the room size distribution of teaching accommodation related to the range of group sizes. For example, where rooms are generally bigger than necessary the occupancy levels will be lower and a shortage of rooms can lead to timetabling problems. Only St Austell exhibited a range of rooms that were generally too small for the groups using them and hence were often overcrowded (figure 28). At Cricklade the balance appeared to be about right (figure 29). At Richmond and Reigate the use of existing accommodation had meant that rooms were generally over-sized in their present use.

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Figure 25: The student social area at Cricklade

Figure 26: The student common room at Reigate

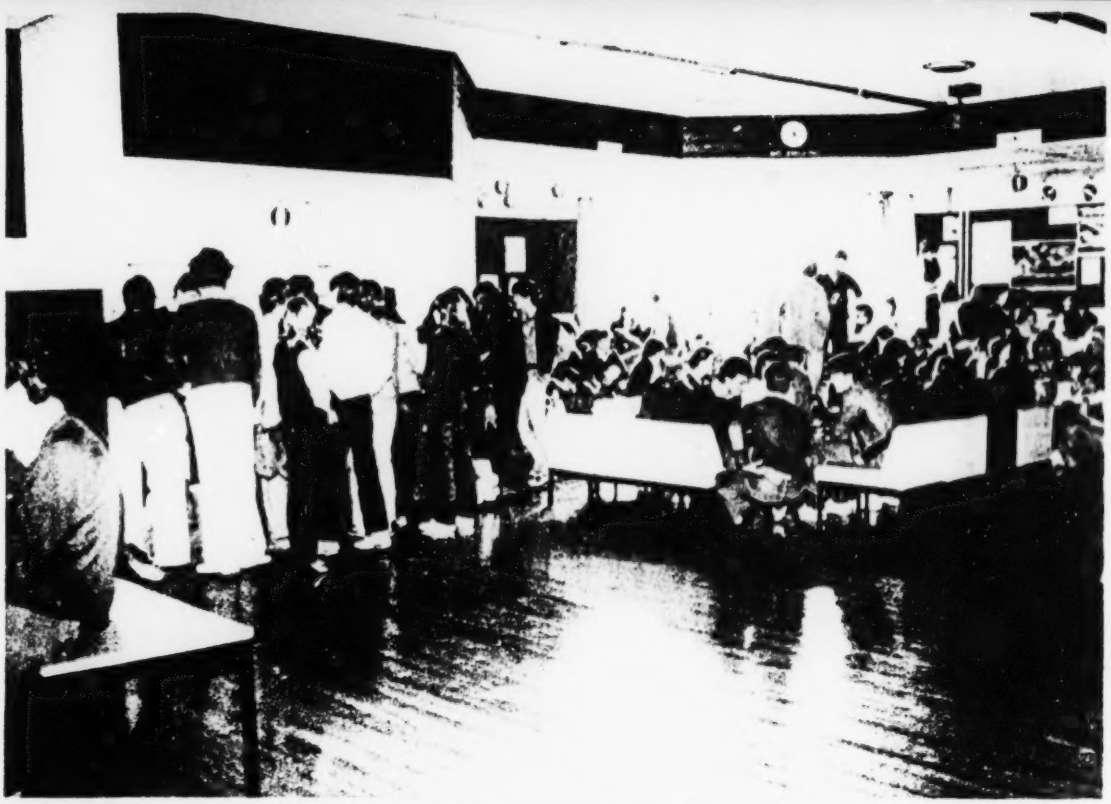

Figure 27: The student social area at St Austell

Figure 28: A small room used for general teaching at St Austell

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Figure 29: A general teaching room at Cricklade

52 All the colleges contained a range of group sizes with smaller groups taking minority subjects. In general the group sizes for one-year students did not tend to be higher than those for students following two-year courses. It is probably true to say that the bigger the institution the smaller the range of group sizes.

Improving Space Utilisation

53 One way to raise the level of occupancy of space at a particular institution is to carry out adaptations to modify the range of available room sizes. However this may often be impractical. The alternative is to attempt to modify the range of group sizes, but again there may be problems of staff deployment. It therefore appears that in the short-term an improvement in utilisation can most easily be achieved by improving the frequency of use of rooms by modifications to the organisational constraints of the timetable. In addition an increase in the effective capacity of the teaching accommodation can be obtained in proportion to an increase in the availability of such accommodation. This can be achieved by extending the effective length of the daily timetable, transport arrangements permitting.

Provision for Examinations

54 Full-time students can expect to spend a significant proportion of their time at the college on examinations. For example, a student on a two-year academic course will have first-year college exams, mock 'A' levels in the second year and the final summer term will be heavily influenced by the 'A' level examinations proper. All the colleges stressed the importance of providing for examinations and those that lacked a suitable large space felt deprived in this respect. There were undoubted problems in making a number of smaller rooms available simultaneously for examinations, and additional expense involved in providing invigilation. The numbers of students simultaneously taking examinations could be substantial – Cricklade claimed a maximum of 200 candidates. There

was no evident solution to the problem of providing for examinations. Where multi-purpose halls were used they tended to be taken over for the entire examination period and so could not be used by others. Where facilities were hired they were not always suitable for examination purposes or conveniently situated. The use of open teaching areas tended to disrupt circulation around them.

Provision for Sport

55 The student demand for conventional team games appears to be much lower at colleges of this type than in secondary education in general. This was partly due to the difficulty of arranging for team members following different courses to be available at the same time – Wednesday afternoon was the popular choice for blocking the timetable to allow this. Weekend jobs occupy many of the students and virtually eliminate Saturday activities. It is also likely that students in this age group have stronger inclinations towards trying more individual sporting activities such as swimming, squash, tennis, golf and sailing. Therefore where large playing fields are provided for the sole use of the college it is likely that they will be under-used. As long as team games are to be provided for the basic requirement appears to be for two grass winter games pitches capable of being used for cricket in the summer, together with a full-sized porous pitch or tennis courts, and changing accommodation. Occasional use of other pitches may be required at the larger colleges if two or more teams are operating in a single sport. In order to obtain better use of playing fields, joint use between colleges and contributory schools or joint use of college and community facilities are alternatives that should be considered.

56 There remains, however, a requirement for accommodation for indoor games and the physical education courses that some students require. Again it is not easy to justify extensive provision on the basis of sole college daytime use. Even a single gymnasium/movement studio or sports hall may be under-used by the college and joint use with the community or contributory schools should be considered. Where community facilities already exist in the locality, the hiring of these for a number of periods per week may be the most economic solution to giving the college a wide range of physical education facilities.

Space Standards in Teaching Accommodation

57 There was a noticeable difference in the area standards per workplace between the two purpose-built colleges. Apart from the specialist provision for vocational work at Cricklade, the teaching accommodation at the two colleges houses comparable activities. Even when allowance is made for the overcrowding at St Austell, it is difficult to justify the disparity in area standards between St Austell and Cricklade. The reasons may in part be related to the different guidelines/statutory requirements that apply to the further education and schools sectors. The allocation of total gross area as between the various categories of provision may also be a factor. It was noticeable that at Cricklade the area standards for science and general teaching accommodation were lower than the recommendations contained in "Notes on Procedure for the Approval of Further Education Projects (other than Polytechnics)." It is possible that certain of the recommendations for specific teaching areas are over-generous when applied to tertiary colleges. Further work will be done by Architects and Building Branch to try and identify area standards appropriate to both sixth form and tertiary colleges.

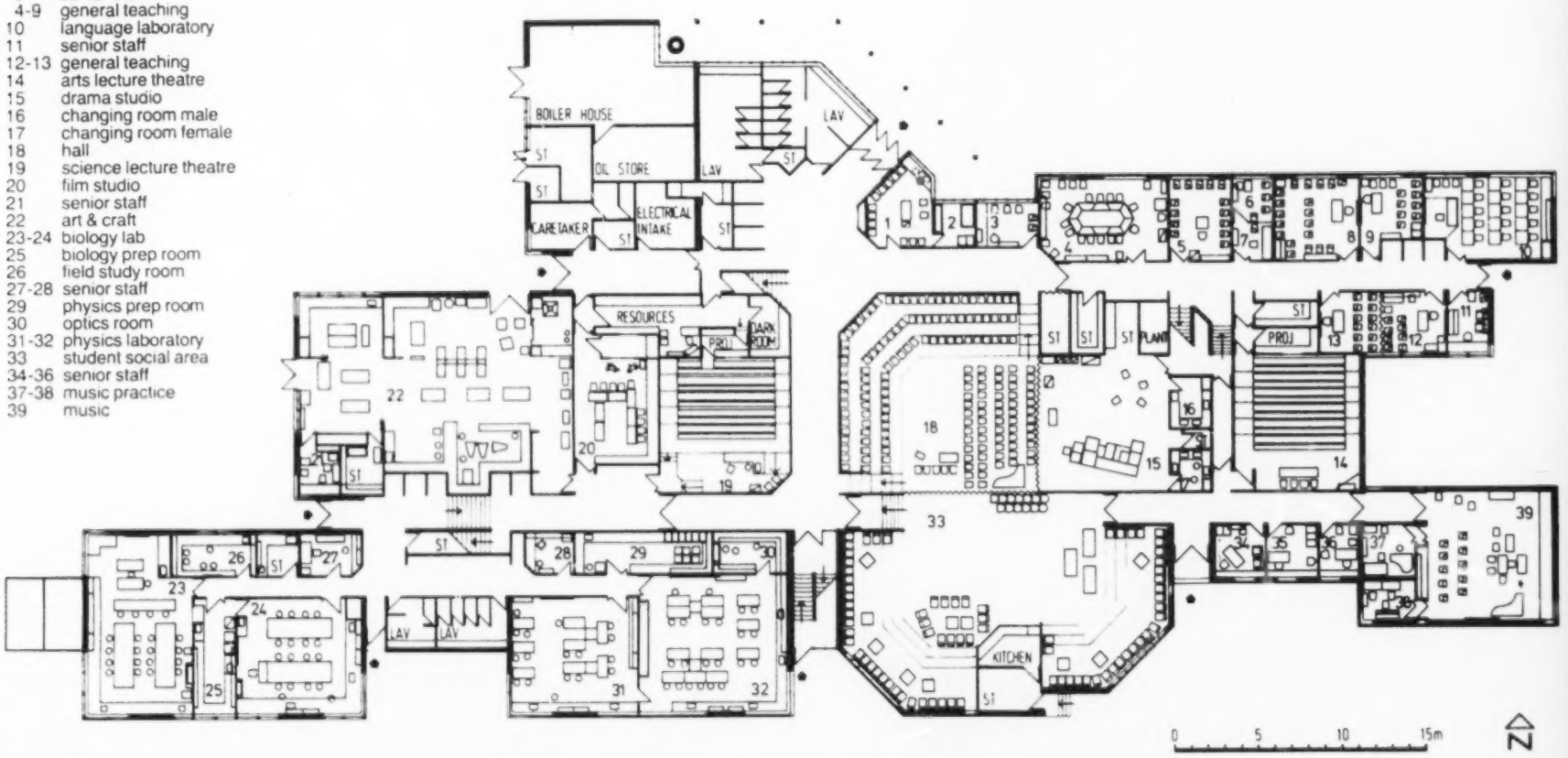
Community Use and Adult Education

58 By their very nature and often central locations 16-19 colleges may be well suited for community and adult education use. Only Cricklade, with a purpose-built theatre, had any community funding but all four colleges were gradually developing as centres for local music makers and for other groups. If the present financial constraints are eased this potential may be more fully exploited and this is an important factor in the design of new or adapted accommodation.

Appendix

KEY

1	senior staff
2	lockers
3	senior staff
4-9	general teaching
10	language laboratory
11	senior staff
12-13	general teaching
14	arts lecture theatre
15	drama studio
16	changing room male
17	changing room female
18	hall
19	science lecture theatre
20	film studio
21	senior staff
22	art & craft
23-24	biology lab
25	biology prep room
26	field study room
27-28	senior staff
29	physics prep room
30	optics room
31-32	physics laboratory
33	student social area
34-36	senior staff
37-38	music practice
39	music



St Austell Sixth Form College – Ground Floor

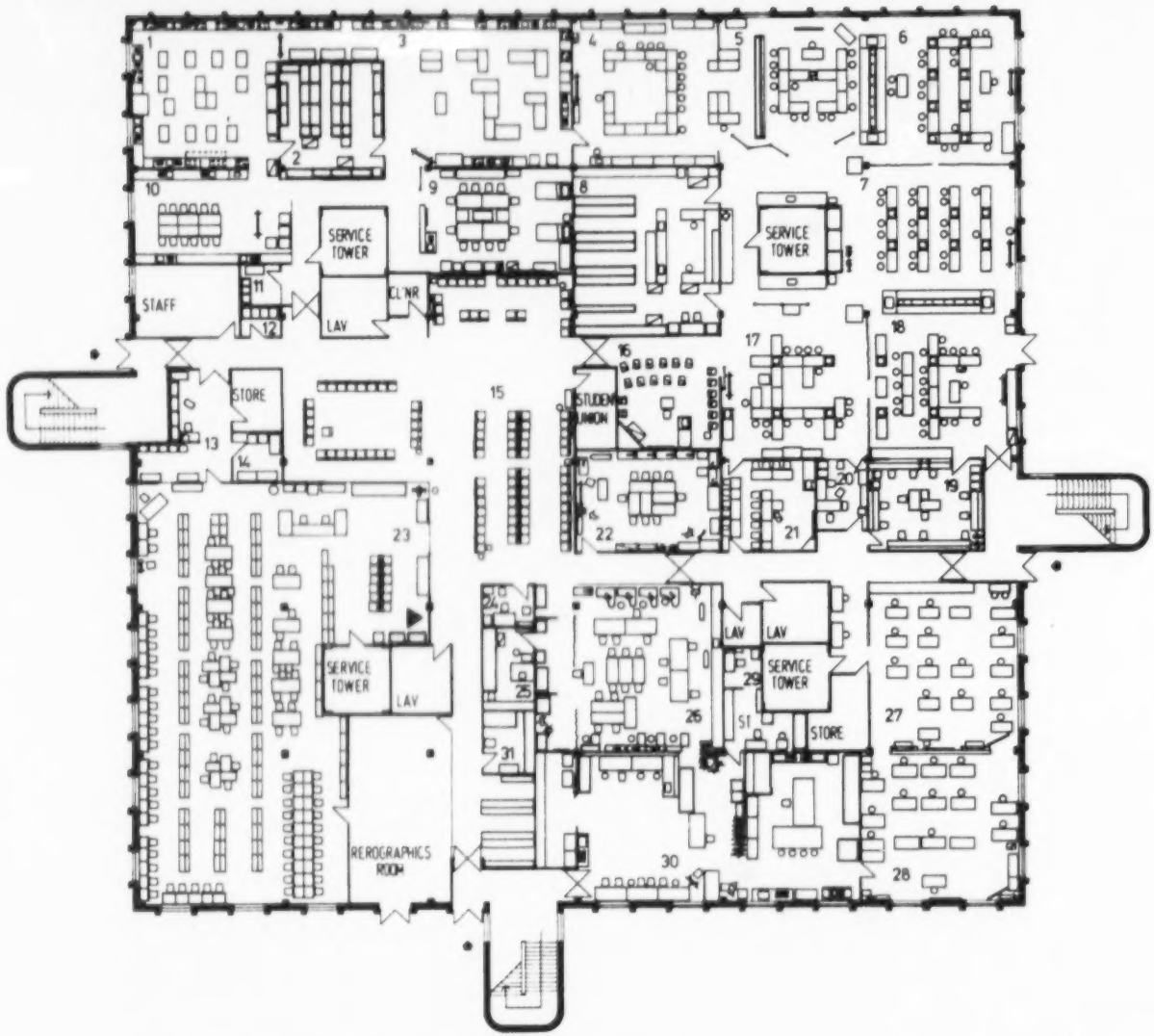
Key

40-49 general teaching
50 library
51 careers
52 senior staff
53 geography
54 staff common room
55 computing room
56 senior staff
57 private study
58 senior staff
59 balance room
60-61 chemistry lab
62 chemistry prep room

St Austell Sixth Form College – First Floor

Key

1 kitchen
2 store
3 household management
4-5 physics
6-7 chemistry
8 science prep room & store
9 household management
10 food technology
11 male changing room
12 female changing room
13 store
14 office
15 student social area
16 science demonstration
17-18 biology
19 staff
20 senior staff
21 general teaching
22 needlecraft
23 library
24 careers
25-26 needlecraft
27-28 engineering (tech drawing)
29 office
30 art
31 sports store



Cricklade College, Andover – Ground Floor

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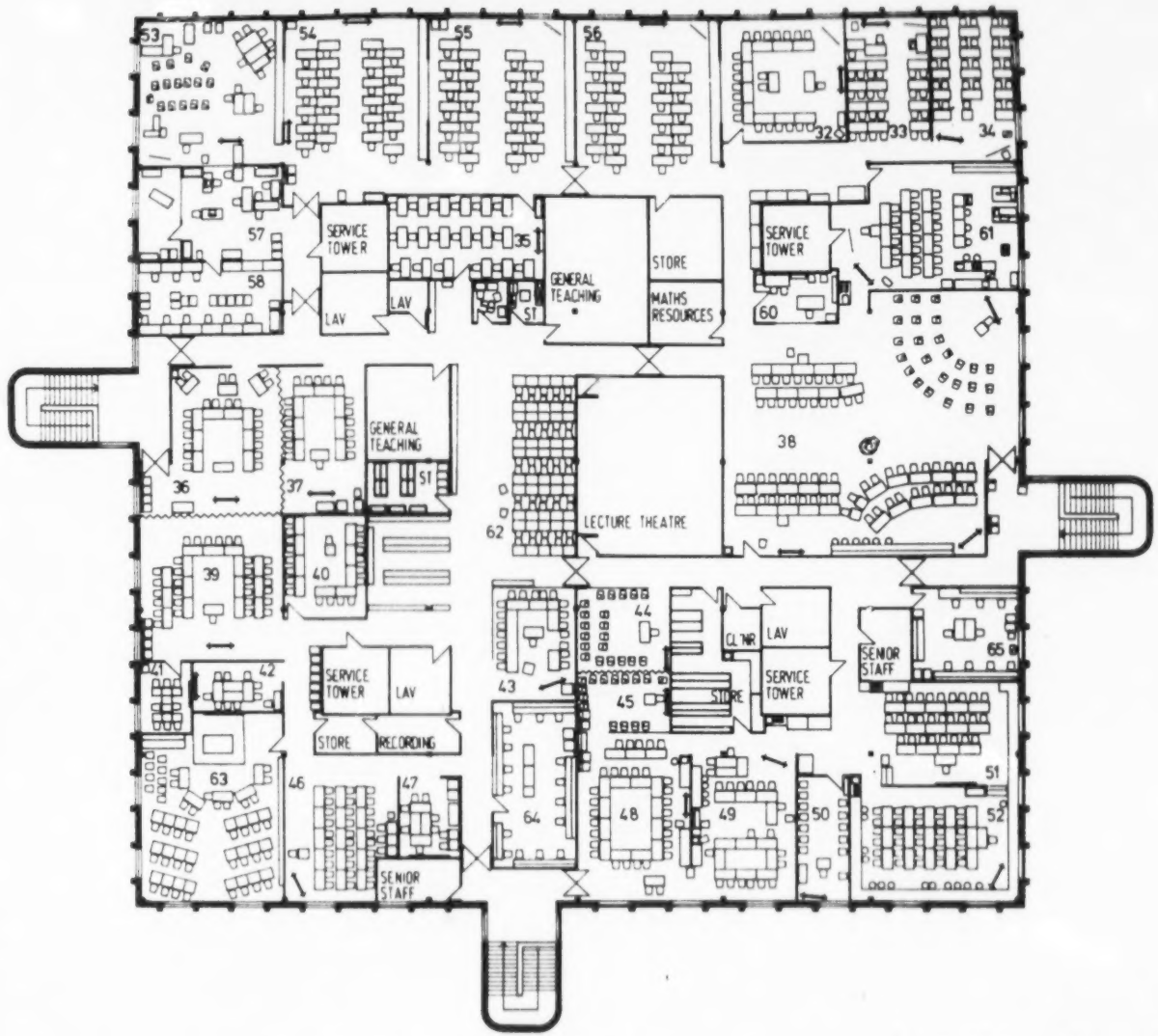
Key

32-52 general teaching
53-56 typing
57 training office
58 staff
59 office
60 senior staff
61 computing
62 private study
63 language laboratory
64-65 staff



Cricklade College, Andover – First Floor

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